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EXAMINER

HOLLIDAY, JAIME MICHELE

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/538,263	Applicant(s) HIDAKA, HIROYUKI	
	Examiner Jaime M. Holliday	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-14 is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5 and 8 is/are rejected.
- 7) ☐ Claim(s) 2, 3, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Response to Arguments

1. Applicant's arguments filed May 15, 2006 have been fully considered but they are not persuasive.

Applicant basically argues that Moles et al. and Kanerva et al. do not disclose or suggest, "a control section that changes a criterion of the determination of the handoff in the idle state with the second communication method in accordance with a state of the first communication method." Applicant further argues that Moles et al. and Kanerva et al. cannot properly be combined to obtain the features of claim 1, since Moles et al. is directed toward a multi-mode communication system, while Kanerva et al. is directed toward a single-mode communication system. Examiner respectfully disagrees. The Office notes that Moles does not disclose "the threshold value register changes the threshold value in accordance with the state of the serving mobile system," (Office Action; Page 4, lines 6-8). In other words, Moles et al. do not specifically disclose the claimed limitation "control section that changes a criterion of the determination of the handoff." Kanerva et al. clearly reads on this limitation (Office Action; Page 4 line 9-Page 5 line 4), as Moles et al. meet the limitations of the rest of the claim.

Applicant further argues, "the mobile device does not have to be moving (Specification; Page 2, line 7-Page 3, line 20)." Examiner respectfully disagrees. The cited passage in the specification disclose specifically disclose that "the mobile device does not have to be moving." It is known in the art that an idle handoff is one in which a handoff is performed when in an idle state, as clearly disclosed in Kim et al. (U.S.

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6,195,551 B1), now made of record. Kim et al. clearly show and disclose that in a cellular environment, an idle handoff occurs when a mobile station has moved from the coverage area of one base station into the coverage area of one base station into the coverage area of another base station during the mobile station idle state (col. 1 lines 10-20).

Therefore, Examiner maintains rejections based on above reasons.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Moles et al. (U.S. Patent # 6,961,583 B2)** in view of **Kanerva et al. (U.S. Patent # 6,493,554 B1)**.

Consider **claim 1**, Moles et al. clearly show and disclose a multi-mode mobile station determines the radio signal quality of a serving mobile system and while in an idle state, the multi-mode mobile station actively monitors the messages communicated over the paging channel, reading on the claimed “a wireless communication terminal, which performs wireless communication with base stations using each of a first communication method and a second communication method and enables to be in an idle state with both methods,” (abstract, col. 4 lines 39-41) comprising:

a processor subsystem **520** associated within the mobile station that includes a counter **540** for determining the FER (Frame Error Rate) value associated with the received PCH (page channel) messages within a given time window, reading on the claimed “measurement section that measure quality of a signal transmitted from the base station,” (fig. 5, col. 8 lines 21-25);

a comparator that compares the calculated FER value against a threshold value stored within a threshold value register, and determines if the calculated FER value is greater than the specific threshold value (col. 8 lines 25-30); if the “health” of the paging channel is determined to be no longer acceptable, the mobile station then voluntarily attempts to select and access an alternative system, reading on the claimed “handoff determination section that determines handoff in an idle state with the second communication method based on quality of signals transmitted from a connected base station and another base station” (col. 7 lines 51-56); and

a threshold value register **550** that stores the threshold value, reading on the claimed "control section," (fig. 5, col. 8 lines 26-27).

However, Moles et al. do not specifically disclose that the threshold value register changes the threshold value in accordance with the state of the serving mobile system.

In the same field of endeavor, Kanerva et al. clearly show and disclose a handover method in which the signal level and/or quality of base stations in a mobile communication system in a mobile station, reading on the claimed "wireless communication terminal which performs wireless communication with base stations comprising a measurement section that measures quality of a signal transmitted from the base station," (abstract, col. 3 lines 51-54). A mobile station (MS) and a serving base station (BTS1) measure the signal level and/or quality of a radio connection, and in addition, the MS measures signals from the neighboring base stations. The unit that makes the handover decision determines the channel coding offered to the radio connection by the possible target cell for handover (BTS2). The channel coding offered by BTS2 and by BTS1 are compared. If the channel coding of BTS2 is weaker than that of BTS1, then the value of the handover criterion is increased from the normal value. If the channel coding of BTS2 is more powerful than that of BTS1, then the value of the handover criterion is decreased from the normal value, reading on the claimed "control section that changes a criterion of the determination of the handoff in the

idle state with the second communication method in accordance with a state of the first communication method,” (col. 6 line 45- col. 7 line 8).

Therefore, it would have been obvious to one skilled in the arts at the time of the invention was made to allow a handover criterion to be determined based on the quality of the serving base station as taught by Kanerva et al. in the multi-mode mobile station of Moles et al., in order to successfully and efficiently handover communications between different systems.

Consider **claim 5**, Moles et al. clearly show and disclose a method for selectively accessing a desirable mobile service system by a multi-mode mobile station that determines the radio signal quality of a serving mobile system and while in an idle state, the multi-mode mobile station actively monitors the messages communicated over the paging channel, reading on the claimed “handoff determination method of a wireless communication terminal which performs wireless communication with base stations using each of a first communication method and a second communication method and enables to be in an idle state with both methods,” (abstract, col. 2 lines 52-54, col. 4 lines 39-41) the method comprising the steps of:

comparing a calculated FER (frame error rate) value of a received PCH (paging channel) against a threshold value stored within a threshold value register, and determining if the calculated FER value is greater than the specific threshold value (col. 8 lines 25-30); if the “health” of the paging channel is determined to be no longer acceptable, the mobile station then voluntarily

attempts to select and access an alternative system, reading on the claimed “determining handoff with the second communication method based on the changed handoff determination criterion” (col. 7 lines 51-56).

However, Moles et al. do not specifically disclose that the threshold value changes in accordance with the state of the serving mobile system.

In the same field of endeavor, Kanerva et al. clearly show and disclose a handover method in which the signal level and/or quality of base stations in a mobile communication system in a mobile station, reading on the claimed “handoff determination method of a wireless communication terminal which performs wireless communication with base stations comprising a measurement section that measures quality of a signal transmitted from the base station,” (abstract, col. 3 lines 51-54). A mobile station (MS) and a serving base station (BTS1) measure the signal level and/or quality of a radio connection, and in addition, the MS measures signals from the neighboring base stations. The unit that makes the handover decision determines the channel coding offered to the radio connection by the possible target cell for handover (BTS2). The channel coding offered by BTS2 and by BTS1 are compared. If the channel coding of BTS2 is weaker than that of BTS1, then the value of the handover criterion is increased from the normal value. If the channel coding of BTS2 is more powerful than that of BTS1, then the value of the handover criterion is decreased from the normal value, reading on the claimed “changing a handoff determination criterion

of the second communication method in accordance with a status of the first communication method," (col. 6 line 45- col. 7 line 8).

Therefore, it would have been obvious to one skilled in the arts at the time of the invention was made to allow a handover criterion to be determined based on the quality of the serving base station as taught by Kanerva et al. in the method of Moles et al., in order to successfully and efficiently handover communications between different systems.

5. **Claims 4 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Moles et al. (U.S. Patent # 6,961,583 B2)** in view of **Kanerva et al. (U.S. Patent # 6,493,554 B1)**, and in further view of **Soderbacka et al. (Pub. # U.S. 2003/0114158 A1)**.

Consider **claim 4**, and **as applied to claim 1 above**, Moles et al., as modified by Kanerva et al., clearly show and disclose the claimed invention except that mobile serving system and alternative system are a 1xEVDO system and a cdma2000 1x system.

In the same field of endeavor, Soderbacka et al. clearly show and disclose a method for performing an intersystem handover of a mobile terminal accessing a communication network via a radio access network of a first type, wherein the communication network comprises at least this radio access network of this first type and a radio access network of a second type, (paragraph 14). When an operator wants to hand over dual-mode mobile terminals from a first type of radio

access network to a second type of radio access network, the first network can hand over the subscriber to the second network in a way that is hardly noticed by the subscriber, who can then also use the services via the second network. Such a dual-mode terminal can be for instance a 3G/2G mobile terminal, the first radio access network a 3G radio access network and the second radio access network a 2G radio access network, reading on the claimed "first communication method is a 1xEVDO system and the second communication method is a cdma2000 1x system," (paragraph 28).

Therefore, it would have been obvious to one skilled in the arts at the time of the invention was made to allow a handover between systems from different generations as taught by Soderbacka et al. in the combination of Moles et al. and Kanerva et al., in order to successfully and efficiently handover communications between different systems in a dual-mode or multi-mode terminal.

Consider **claim 8**, and **as applied to claim 5 above**, Moles et al., as modified by Kanerva et al., clearly show and disclose the claimed invention except that mobile serving system and alternative system are a 1xEVDO system and a cdma2000 1x system.

In the same field of endeavor, Soderbacka et al. clearly show and disclose a method for performing an intersystem handover of a mobile terminal accessing a communication network via a radio access network of a first type, wherein the communication network comprises at least this radio access network of this first type and a radio access network of a second type, (paragraph 14). When an

operator wants to hand over dual-mode mobile terminals from a first type of radio access network to a second type of radio access network, the first network can hand over the subscriber to the second network in a way that is hardly noticed by the subscriber, who can then also use the services via the second network. Such a dual-mode terminal can be for instance a 3G/2G mobile terminal, the first radio access network a 3G radio access network and the second radio access network a 2G radio access network, reading on the claimed "first communication method is a 1xEVDO system and the second communication method is a cdma2000 1x system," (paragraph 28).

Therefore, it would have been obvious to one skilled in the arts at the time of the invention was made to allow a handover between systems from different generations as taught by Soderbacka et al. in the combination of Moles et al. and Kanerva et al., in order to successfully and efficiently handover communications between different systems in a dual-mode or multi-mode terminal.

Allowable Subject Matter

6. **Claims 9-14** are allowed.
7. **Claims 2-3 and 6-7** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaime M. Holliday whose telephone number is (571) 272-8618. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaime Holliday

Patent Examiner


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER